

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 December 2004 (23.12.2004)

PCT

(10) International Publication Number
WO 2004/111043 A1

(51) International Patent Classification⁷: C07D 405/06, 405/08, 417/06, 417/08, H04B 10/13

(21) International Application Number: PCT/NZ2004/000124

(22) International Filing Date: 17 June 2004 (17.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 526561 18 June 2003 (18.06.2003) NZ

(71) Applicant (for all designated States except US): INDUSTRIAL RESEARCH LIMITED [NZ/NZ]; Brook House, 24 Balfour Road, Parnell, Auckland (NZ).

(72) Inventors; and

(75) Inventors/Applicants (for US only): WOOLHOUSE, Anthony, David, [NZ/NZ]; 21 Harbour View Road, Northland, Wellington (NZ). KAY, Andrew, John, [NZ/NZ]; 23 Moa Street, Alicetown, Lower Hutt, Wellington (NZ).

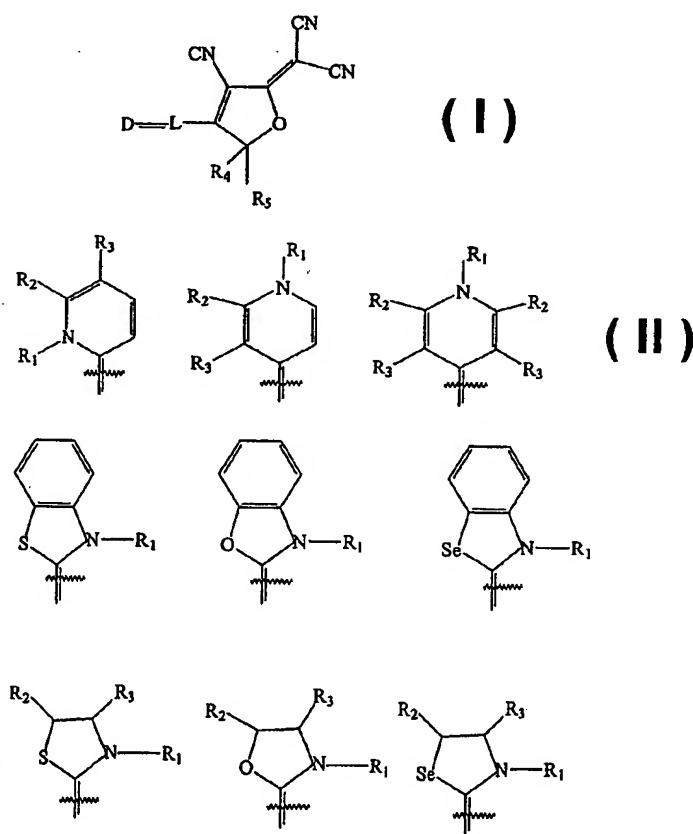
(74) Agents: GRIFFITHS, Teresa, V., et al.; A J Park, 6th Floor Huddart Parker Building, Post Office Square, P O Box 949, Wellington, 6015 (NZ).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: ZWITTERIONIC NON-LINEAR OPTOPHORES AND DEVICES INCORPORATING SAME



(57) Abstract: The invention relates to zwitterionic second order non-linear optophores comprising a compound of general Formula I: wherein D is selected from: and L and R1-R5 are as herein defined. Also, provided are polymeric compositions incorporating these compounds. These optophores display a large and efficient non-linear optical response and therefore can be used in the production of optoelectronic devices.

WO 2004/111043 A1



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*